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EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2177	2

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/059,345	Applicant(s) CRAIG ET AL.	
	Examiner Kuen S Lu	Art Unit 2177	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-5 and 12-18 are rejected under 35 U.S.C. 102(e) as anticipated by Coden et al. (U.S. Patent 6,341,277, hereafter "Coden").

As per Claims 1, 15 and 16, Coden teaches the following:

"for a plurality of responses, associating a Boolean expression with each of said responses, said Boolean expression to be satisfied by an appropriate query for said associated response" at col. 2, lines 52-54 by describing a compound query contains one or more Boolean expressions of one or more of the query objects where Boolean expressions are associated with query objects, the responses;

"receiving a query" at Fig. 19, element 1900 and col. 3, lines 45-47 where user query is entered via a Graphical User Interface;

"for each of said responses, determining if an associated Boolean expression is satisfied by said received query" at col. 6, lines 36-40 and col. 18, lines 37-38 where compound query is transformed into Boolean expression and the Boolean expression is

then evaluated and at col. 18, lines 37-38 where the Compound Feature Query Object is able to evaluate a Boolean expression; and

"presenting at least one of said responses, in response to said determining" at Figs. 19-19A-19B and col. 29, lines 23-35 and col. 34, lines 8-9 where the result of query elements is returned.

As per claim 2, Coden teaches "presenting comprises presenting a response having an associated Boolean expression satisfied by said received query" at Figs. 19-2 and 19A-19B and col. 29, lines 23-35 where query object (element 340), the response, is associated with a Boolean expression (Fig. 19B) is satisfied by the received query (a given query Q in Fig. 15-1).

As per claim 3, Coden teaches "plurality of responses each comprise information at least partially responsive to said query" at Fig. 19B where query objects are expressed in Boolean expression responsive to a given query.

As per claim 4, Coden teaches "Boolean expression comprises an expression to match a plurality of words within a query" at Fig. 19B where Boolean expression comprises an expression to match a plurality of words.

As per claim 5, Coden teaches "plurality of responses and associated Boolean expressions are stored in a database" at Fig. 6, elements 610-615 and col. 10, lines 60-65 and col. 11, lines 11-14 where query objects and associated expression are stored in database.

As per claim 12, Coden teaches "presenting a plurality of additional responses associated with said at least one response" at Figs. 15C-1 and 15C-2 where compound query object 350 is associated with query objects 310 and 320.

As per claim 13, Coden teaches "at least one response comprises a link to additional information available by way of a computer network in communication with said computer" at Fig. 1, elements 116, 126 and 128 where response is linked to additional information by way of network.

As per claim 14, Coden teaches "at least some of said Boolean expressions comprise an identifier of a compound Boolean expression, to be resolved into a plurality of Boolean terms during said determining" at Fig. 19B and col. 29, lines 44-55 by showing a single text entry field contains a complex Boolean query expression multiple component query criteria connected by Boolean operators..

As per claim 17, Coden teaches the following:

"organizing said information into a plurality of responses" at col. 2, lines 52-54 by describing a compound query contains one or more Boolean expressions of one or more of the query objects where Boolean expressions are associated with query objects, the responses;

"for a particular one of said responses formulating at least one query, wherein said particular one of said responses is responsive to said at least one query" at Figs. 20A-20B where query objects (Fig. 20B, element 2040-2055) are responsive to the query expression (Fig. 20A, element 2005);

"formulating a Boolean expression from said at least one query, said Boolean expression satisfied by said at least one query" at col. 2, lines 52-54 by describing a compound query contains one or more Boolean expressions of one or more of the query objects where Boolean expressions are associated with query objects, the responses; and

"storing said Boolean expression in association with said particular one of said responses" at Fig. 6, elements 610-615 and col. 10, lines 60-65 and col. 11, lines 11-14 where query objects and associated expression are stored in database.

As per claim 18, Coden teaches the following:

"comprising repeating said formulating at least one query" at Figs. 20A and 20B where one query comprises of a plurality of query objects;

"formulating a Boolean expression" at col. 2, lines 52-54 by describing a compound query contains one or more Boolean expressions of one or more of the query objects where Boolean expressions are associated with query objects, the responses; and

"storing, for each of said plurality of responses" at Fig. 6, elements 610-615 and col. 10, lines 60-65 and col. 11, lines 11-14 where query objects and associated expression are stored in database.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Coden et al. (U.S. Patent 6,341,277, hereafter "Coden"), as applied to claims 1-5 and 15-18 above, and in view of Schabes et al. (U.S. Publication 2002/0123994, hereafter "Schabes").

As per claim 6, Coden does not specifically teach "determining further comprises calculating quality of match metrics for satisfied Boolean expressions, each of said quality of match metrics providing an indicator of a quality of match of a satisfied Boolean expression to said received query".

However, Schabes teaches "determining further comprises calculating quality of match metrics for satisfied Boolean expressions, each of said quality of match metrics providing an indicator of a quality of match of a satisfied Boolean expression to said received query" at Page 3, [0022] 4-12 where the degrees of match between query and matching context are scored to reflect the difference of the match.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Schabes' teaching with Coden's by calculating the quality of match of sub-expressions to measure how it is satisfied by the received query because both references teach evaluating query, searching qury objects and matching received content with query (Coden: col. 2, lines 5-64, Schabes: Page 2, [0022], line 1 – Page 3, [0022], line 12), and, further, both references teach using

Boolean expressions for evaluating query objects and matches (Coden: col. 2, lines 5-64, Schabes: Page 2, [0022], line 1 – Page 3, [0022], line 12). The combined reference would have enabled Coden's users to accurately indicate the specific query objects and rank them accordingly such that the query can be performed flexibly with optimization (Schabes: Page 2, [0019]-[0021], Coden: col. 1, lines 61-65).

As per claims 7 and 10, Coden teaches "Boolean expressions may be expressed as a plurality of logically ORed sub-expressions, and said Boolean expression is satisfied if one of its sub-expressions is satisfied" at Figs. 19A-19B where a plurality of OR operators to logically OR the sub-expressions and it would have been obvious to the ordinary skilled in the art that a compound ORed Boolean expression is satisfied if one of its two ORed sub-expressions is satisfied.

Schabes further teaches "quality of match metrics are calculated by calculating an indicator of a quality of match for sub-expressions satisfied by said received query" at Page 3, [0022] 4-12 where the degrees of match between query and matching context are scored to reflect the difference of the match.

As per claim 8, Schabes further teaches "presenting is based on a said quality of match metrics" at Fig. 18, elements 514-515 and Page 19, [0198] where output of the match list is ranked.

As per claim 9, Schabes further teaches "calculating degree of match metrics representative for un-satisfied Boolean expressions, each of said degree of match metrics providing an indicator of a degree of match of an un-satisfied Boolean expression to said received query" at Fig. 18, elements 500-515 and Page 19, [0197]-

[0198] where select documents satisfying Boolean expression and matched to set the rankings which is a calculation of match metrics indicating the degree of satisfying the Boolean expression, and on the other hand, the metrics indicates the degree of not satisfying the un-satisfied Boolean expression to the received query.

As per claim 11, Coden teaches "each of said sub-expression comprises a plurality of logically ANDed terms and each of said degree of match metrics is calculated by determining a number of terms in any sub-expression satisfied by said expression" at Figs. 19A-19B where a plurality of AND operators to logically AND the sub-expressions and each of said degree of match metrics is calculated by determining a number of terms in any sub-expression satisfied by said expression (Page 19, [0198], lines 5-16.

Conclusions

6. The prior art made of record

A. U.S. Patent 6,341,277

B U.S. Publication 2002/0123994

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

C U.S. Patent 6,571,239

D U.S. Patent 6,363,373

E U.S. Patent 6,665,666

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 703-305-4894. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Kuen S. Lu
Patent Examiner

SUBBAYA CHANNAVAJJALA
PRIMARY EXAMINER

June 9, 2004